



Tipo	Periódico
Título	Co-Localization of Crostamine with Internal Membranes and Accentuated Accumulation in Tumor Cells
Autores	Nicole Caroline Mambelli-Lisboa, Juliana Mozer Sciani, Alvaro Rossan Brandão Prieto da Silva, Irina Kerkis
Autor (es) USF	Juliana Mozer Sciani
Autores Internacionais	
Programa/Curso (s)	Programa de Pós-Graduação Stricto Sensu em Ciências da Saúde
DOI	10.3390/molecules23040968
Assunto (palavras chaves)	co-localization; molecular imaging; membrane trafficking; cell penetrating peptide (CPP); crotamine; tumor marker
Idioma	Português
Fonte	Título do periódico: Molecules ISSN: 1420-3049 Volume/Número/Paginação/Ano: v. 23, p. 968, 2018
Data da publicação	20 April 2018
Formato da produção	Digital <a href="https://doi.org/10.3390/molecules23040968">https://doi.org/10.3390/molecules23040968</a>
Resumo	<p>Crotamine is a highly cationic; cysteine rich, cross-linked, low molecular mass cell penetrating peptide (CPP) from the venom of the South American rattlesnake. Potential application of crotamine in biomedicine may require its large-scale purification. To overcome difficulties related with the purification of natural crotamine (nCrot) we aimed in the present study to synthesize and characterize a crotamine analog (sCrot) as well investigate its CPP activity. Mass spectrometry analysis demonstrates that sCrot and nCrot have equal molecular mass and biological function—the capacity to induce spastic paralysis in the hind limbs in mice. sCrot CPP activity was evaluated in a wide range of tumor and non-tumor cell tests performed at different time points. We demonstrate that sCrot-Cy3 showed distinct co-localization patterns with intracellular membranes inside the tumor and non-tumor cells. Time-lapse microscopy and quantification of sCrot-Cy3 fluorescence signals in living tumor versus non-tumor cells revealed a significant statistical difference in the fluorescence intensity observed in tumor cells. These data suggest a possible use of sCrot as a molecular probe for tumor cells, as well as, for the selective delivery of anticancer molecules into these tumors.</p>
Fomento	